

Opportunities for the Alaskan Way Viaduct – Envisioning a Better Future

August 1, 2001, 6:00 to 9:00 p.m.

Bell Harbor Conference Center

2211 Alaskan Way, Pier 66, Sound Room

Meeting Summary

Meeting Objectives

Pat Serie welcomed the group, outlined the agenda, and reminded the group of the values and ideas they discussed at the June meeting. The objective of the meeting was to discuss the key assumptions and principles that are the basis for the developing concepts, describe the concepts, which are a work in progress, and open the discussion for feedback from the group on each of the concepts.

Background

Maureen Sullivan presented the group with background information on the Alaskan Way Viaduct. The facility was built in 1953 as a bypass of downtown Seattle and was designed for 65,000 vehicles per day. Since then, seismic standards have evolved and the structure does not meet today's standards. The viaduct currently carries 110,000 vehicles per day in 6-7 lanes. The viaduct carries 25% of north-south traffic through downtown Seattle. At least 60% of traffic in the central part of the viaduct bypasses the core business district.

Key Assumptions & Principles for Concepts

Maureen Sullivan reminded the group of the key assumptions and principles discussed in the previous meeting. The group felt it was important to maintain or increase existing through capacity and access to the city center as well as adequate traffic flow during construction. There was also interest raised in considering regional transportation needs and multi-modal transportation options. Other issues raised by the group included maintaining access to ferry operations, port facilities, and BNSF operations and other waterfront uses as much as possible during construction. These are the issues that the project team spent the last month addressing as it developed potential concepts.

Examples and Concepts

John Reilly presented an overview of worldwide examples of projects that could be used as concepts relative to the Alaskan Way Viaduct question.

John Reilly brought the group up to date on the tunnel technology and examples of tunnel concepts being used around the world. These examples include:

- The **4th Bore, Elbe River Tunnel** added only two lanes to the existing six using the largest tunnel boring machine to date (14.2m/46.5 ft. diameter). This example has emergency access between old and new tunnels as well as an innovative ventilation system. This tunnel accommodates two full standard lanes and one breakdown lane.
- The **Tomei Tunnel** in Japan was built using the Sequential Excavation Method (SEM) and is an example of a 2x3 lane highway tunnel. Using the SEM, various flexible shapes are possible. It is a practice that is now well accepted and it allows for easier transitions and off-ramps.

- The **Mount Baker Ridge Tunnel** is considered an innovative and successful concept. It was built using incremental construction through parallel small drifts. The tunnel's inside diameter is 63 feet and allows for five through lanes plus pedestrian and bike lanes. This tunnel also has complete ventilation and life safety systems.

Concepts for the Alaskan Way Viaduct

Before participants viewed potential concepts, Maureen Sullivan prompted the group to think about the following points:

- Current demand in the corridor is approximately six lanes of traffic (four through lanes).
- Future growth will occur.
- All concepts work with aggressive transportation demand management (TDM).
- All of the concepts shown to replace the viaduct are possible, but all have pros and cons, considerations and trade-offs. These include:
 - Function
 - Construction
 - Environment
 - Community

These concepts include:

- Improved elevated structures
- Cut-and-cover tunnel along Alaskan Way
- Bored / constructed tunnels on
 - Alaskan Way
 - 1st / 2nd Avenues
 - 3rd / 4th / 5th Avenues
 - Elliott Bay
 - I-5
- Multi-modal options with boulevard – “many straws”
- Elliott Bay Bridge

Elevated Structure

The elevated structure concept could meet today's capacity and more, along with providing opportunities for new access and transit capacity. This concept would be designed with improved aesthetics compared with the existing viaduct; however, it would still block views. A new elevated structure would meet current seismic performance requirements and could be built before the existing viaduct is demolished. This concept also has noise impacts.

Group participants raised the following issues:

- The new concept's staggered, elevated structure could open up space, create a signature structure on the waterfront, connect SODO to Ballard, and connect neighborhoods.
- Transit might be better accommodated on an elevated structure.
- The idea of a bridge over the ground and not ‘going anywhere’ was presented as a concern.
- Why is an elevated structure with six lanes and at a higher level not still being considered? It would provide better views, pedestrians could cross underneath, the waterfront would open up underneath, and noise would be less of an issue.

- How high could an elevated structure be built?
- A 6-lane structure would not open up the views from downtown as are desired by some.
- With a higher structure, would access to downtown be more difficult?
- How far apart can the columns be?
- An elevated structure may bring the city back together.
- Could the height of the structure be taken advantage of by building bigger and getting more capacity out of the structure?

Cut-and-Cover Tunnel

The cut-and-cover tunnel concept meets today's capacity, provides opportunities for new access and transit capacity, and can be built before the existing structure is demolished. This would provide opportunities for better ferry operations, remove the visual barrier to the waterfront, and reduce noise. At a south-end portal, improvements to Port, rail, and truck access and loading efficiency are possible. While this concept allows for tying in seawall improvements, there would be substantial construction and time impacts. This concept would also have to address disturbing contaminated soil. A cut-and-cover tunnel would either transition to an elevated structure around Pike in order to meet the Battery Street tunnel grade, or require some new (possibly bored) access to Aurora Avenue North.

Group participants raised the following issues:

- This concept would be a good option to address the seawall in combination with the viaduct.
- Could there be a combination solution of a cut-and-cover tunnel to improve the seawall and then connect to bored tunnels?
- Is there a way to keep traffic flowing during construction of this alternative?
- A seawall solution has to be included in the ultimately chosen concept. The chosen concept should accomplish more than one solution.
- How would cut-and-cover serve local traffic problems?
- What are the trade-offs between on and off-ramps and more land needed to accommodate the ramps?
- The concepts do not have to only mean replacement. They can have many options (upper, middle, lower).
- Is it possible to remove the existing seawall, move it further out, and utilize the space differently?
- How long would construction of a cut-and-cover tunnel be and what are the type of impacts that would occur? How much construction has to be on land versus barge? How long would one area be impacted? What is the disruption to ferry and port access?
- If a cut-and-cover tunnel is not chosen, what are the options for just replacing the seawall?
- Where is the seawall and what businesses does it affect?
- Is there an option that just looks at "covering," not cutting?
- Ferry holding space is also an issue.

Bored Tunnels

The bored tunnel concept is another option that could be built before the viaduct is torn down. It would also remove the visual barrier at the waterfront as well as reduce noise. This concept would have superior seismic performance and free surface space on Alaskan Way. The bored

tunnel concept would serve primarily as a through-traffic bypass. The facility would need two large tunnels to meet capacity, and include extensive ventilation and emergency egress. Impacts would be significant at each of its portals, but improvements for Port, rail, and truck facilities would be possible.

Group participants raised the following issues:

- What is the potential for access to downtown with the bored tunnel concept versus the cut-and-cover concept? Will a bored tunnel limit access?
- Could light rail be added to the bored tunnel concept?
- Is there an assumption that traffic will move from I-5 to SR 99 with a new structure?
- Bored tunnels seem to deal well with through traffic.
- A new bored tunnel could open up new connection options, like Battery Street tunnel.
- An advantage of a bored tunnel would be removing traffic from local streets.
- How would connections at the south end be made?
- Would access from West Seattle to the bored tunnel only support through traffic? How would drivers from West Seattle access downtown?
- Would a bored tunnel have the same capacity as the existing viaduct?
- A potential downside of a bored tunnel is losing major east/west connections and a reduction in capacity.
- There is a need to continue discussing how potential connections would be made, such as how to get people and traffic to Elliott and Western Avenues.

Multi-Modal/Boulevard

The multi-modal/boulevard concept would encourage use of other transportation modes and maximize the use of existing surface street capacity. This concept could be tied to or used with the other concepts; however, it does not meet current corridor demand and will push traffic impacts elsewhere in the city.

Group participants raised the following issues:

- Many participants felt that the multi-modal/boulevard concept does not meet the purpose of the project.
- The multi-modal/boulevard concept should not continue to be pursued, as it does not solve the problem of accommodating the demand through corridor.
- Adding pricing (tolls, parking, gas increases) to the concept could reduce the demand and need to build additional roadways.
- If pricing is applied to one concept, it should be applied to all of the concepts.
- A boulevard along the waterfront may be very appealing to some.
- The boulevard could replace the viaduct on Alaskan Way if a tunnel option is chosen.
- How would access to Pioneer Square and Broad Street be affected by this concept?
- What will the space under the viaduct be used for if it is not replaced with an elevated structure?
- It appears that none of the concepts can stand alone, but that they will have to be combined.

Next Steps

WSDOT and the City of Seattle expressed interest in maintaining the Leadership Group on an ad hoc basis to elicit feedback at key project milestones. Members of the leadership group were asked to contact the project team if they had questions or concerns about continuing their role on the project. Leadership group members asked for an information kit to use in discussions with their groups about the project.

Leadership Group Participants Present

Name	Affiliation
Bruce Agnew	Cascadia Project
Charlie Chong	West Seattle Neighborhood
Ralph Cipriani	Seattle Design Commission
Donald John Coney	Queen Anne Community Council; Pedestrian Advisory Board
Lee Copeland	Weinstein/Copeland Architects
Steve Erickson	Magnolia Neighborhood
Dave Gering	Manufacturing Industrial Council
Joel Horn	Wright Runstad
Peter Hurley	Transportation Choices Coalition
Stephen Lundgren	Ballard Neighborhood
Doug MacDonald	Washington State Department of Transportation, Secretary
Mary McCumber	Puget Sound Regional Council
Connie Niva	Washington State Transportation Commission
Neil Peterson	Flexcar
Judy Runstad	Foster Pepper Shefelman
Paul Schell	City of Seattle, Mayor
Tom Tierney	Port of Seattle
Paul Toliver	King County DOT
Paul Tomita	City of Seattle Planning Commission
Doug Vann	Pioneer Square Neighborhood

Guests and Project Team Attendees

Name	Affiliation
Bob Chandler	City of Seattle
Denna Cline	City of Seattle Strategic Planning
David Dye	Washington State Department of Transportation
Anne Fiske-Zuniga	City of Seattle Transportation Department
Daryl Grigsby	City of Seattle Transportation Department
Carol Hunter	Washington State Department of Transportation
Chris Marr	Washington State Transportation Commission
Richard Miller	City of Seattle Transportation Department
Linda Mullen	Washington State Department of Transportation
Kristen Nielsen	City of Seattle Strategic Planning
Tom Noguchi	Mirai Associates
John Okamoto	Washington State Department of Transportation
Gerry Pade	Puget Sound Clean Air Agency

Name	Affiliation
Harvey Parker	Consultant
Steve Pearce	City of Seattle Strategic Planning
John Rahaim	City of Seattle, City Design
Liz Rankin	City of Seattle Transportation Department
John Reilly	John Reilly Associates International
Susan Sanchez	City of Seattle Strategic Planning
Pat Serie	EnviroIssues
Jared Smith	Parsons Brinckerhoff
Maureen Sullivan	Washington State Department of Transportation
Jim Waymire	OTAK
Karl Winterstein	Parsons Brinckerhoff
Ben Wolters	City of Seattle Seattle Office of Economic Development
Phillip Yin	CIBC World Markets
Richard Miller	City of Seattle Transportation Department

Leadership Group Members Not Present

Name	Affiliation
Scott Blackman	Argosy
Dan Evans	Daniel J. Evans & Associates
David Goodyear	David Goodyear & Associates
Jerry Grinstein	Madrona Investments
Richard McIver	City of Seattle Council
John Musgrave	West Seattle Neighborhood
Jane Nishita	Qwest
Charles Roeder	UW Dean of School of Civil Engineering
Don Royse	Seattle Design Commissioner
Bob Watt	Greater Seattle Chamber of Commerce
Jim Young	Seattle Steam Company